

NOTES ON THE MOLLUSCA OF FORRESTER ISLAND, ALASKA.

BY GEORGE WILLETT.

During the past four months (1914 to 1917 inclusive), which were spent by the writer on Forrester Island, Alaska, some attention was given to the study of the mollusca of the locality. The shore line was rather thoroughly traversed and some dredging was done in various depths down to seventy-five fathoms.

Forrester Island lies well out to sea, a few miles north of the Canadian boundary line. It is about fifteen miles west of Dall Island, and seventy-five miles out from the mainland shore. The island is small, being approximately five miles in length and from a half mile to a mile and a half in width. It is very rocky along shore but is well timbered from the high-water line to the summits of the hills. There are a number of small islets and groups of rocks lying off the main island and practically all of these were visited one or more times.

As Forrester Island is well within the sweep of the Japan current, the water is much warmer than in the inside channels around Dall and Prince of Wales islands. The effect of this difference in temperature is shown in the fact that several species of shells that occur in 10-15 fathoms in inside waters were not found in less than 40-50 fathoms at Forrester Island. Also a number of species that were rather common on Dall and Prince of Wales islands were not noted on Forrester Island at all. As there are neither sand beaches nor mud flats on the island, many forms requiring such situations were conspicuously absent. The tidal currents in the vicinity are very strong at times, and it is quite possible that some species of which fragments or dead shells were found do not properly belong to the island fauna but were carried to the locality by the strong currents. One of the most interesting features of this region from a conchological standpoint is the fact that in many instances it seems to be a meeting point between boreal species and those from the southern fauna.

A number of species taken have since been described as new. In such cases I have mentioned the paper in which the descrip-

tion was given. The chitons obtained were made the subject of a paper by Dr. S. S. Berry in the Proceedings of the California Academy of Sciences (Fourth Series, Vol. VII, No. 10, September 1, 1917, pp. 229-248). All species of which I was doubtful as to identity were submitted to Dr. Wm. H. Dall and named by him. For this kind assistance I wish to express here my very great appreciation.

The following is a list of species of bivalves taken with brief notes on same:

Terebratulina caput-serpentis Linn. Several young specimens dredged in 50-60 fathoms.

Terebratalia transversa Sby. Common 5-30 fathoms.

Laqueus jeffreysi Dall. Abundant in 65-75 fathoms.

Nucula tennis Mont. Rare. One or two dead valves and one living young specimen dredged.

Nucula (Acila) castrensis Hds. Common 40-50 fathoms. At Waterfall, Prince of Wales Island, plentiful in 10 fathoms.

Leda minuta Fabr. Fairly common 20-40 fathoms.

Leda penderi Dall. One dead valve dredged. Rather common at Waterfall in 10 fathoms.

Leda fossa Baird. A few dead valves dredged in 75 fathoms.

Glycymeris septentrionalis Midd. Rather uncommon.

Glycymeris corteziuna Dall. Abundant 20-40 fathoms.

Glycymeris migueliana Dall. Fairly common 20-40 fathoms.

Philobrya setosa Cpr. Fairly common.

Pecten (Chlamys) hericeus Gld. Found occasionally.

Pecten (Chlamys) hindsi Cpr. Abundant from low-tide line to 60 fathoms.

Pecten (Chlamys) islandicus Mull. A few specimens taken in dredge with last species.

Pecten (Chlamys) caurinus Gld. Single dead valve dredged.

Pecten (Pseudamusium) randolphi Dall. Two young specimens dredged in 50 fathoms.

Pecten (Propeamusium) alaskense Dall. Fairly common in 50-60 fathoms.

Hinnites giganteus Gray. Rather common. More abundant in inside channels.

Lima (Limatula) subauriculata Mont. Dead valves common 25-50 fathoms. Living specimens rarely taken.

Monia macroschisma Desh. Rather common.

Mytilus californianus Conr. Abundant. Some specimens attaining a length of nine or ten inches.

Modiolus modiolus Linn. Occasional. Abundant in inside waters.

Musculus niger Gray. *Musculus seminudus* Dall. A few specimens of each of these species were taken in about 30 fathoms.

Musculus laevigatus Gray. One or two dead valves dredged.

Musculus vernicosus Midd. Common at times in sea weed at extreme low tide mark.

Thracia curta. One dead valve dredged. Rather common at Waterfall in 12 fathoms.

Thracia challisiana Dall. A few dead specimens taken in 30-40 fathoms. Living specimens were probably all too deep in gravel to be secured by the dredge.

Pandora (Kennerlyia) forresterensis Willett. (NAUTILUS, xxxi. 1918, p. 134.) Abundant in 60-70 fathoms; less plentiful in more shallow water.

Pandora (Kennerlyia) bilirata Conr. Common 25-50 fathoms.

Lyonsia (Entodesma) saxicola Baird. Dredged rarely. Rather plentiful in inside waters.

Lyonsia (Entodesma) inflata Conr. One living specimen dredged in 50 fathoms.

Lyonsia striata Mont. Occasional 30-60 fathoms.

Mytilimeria nuttalli Conr. Fairly common.

Cuspidaria planetica Dall. Not rare 50-60 fathoms.

Astarte compacta Cpr. Abundant 25-60 fathoms.

Astarte willetti Dall. (NAUTILUS, xxxi, July, 1917, p. 10.) Abundant with the last species. Adults mostly found in the deeper water.

Astarte alaskensis Dall. Abundant in company with the last two. *A. esquimaulti* Baird, was found to occur plentifully in 10 fathoms at Waterfall, but was not noted at Forrester Island.

Venericardia crebricostata Krause. Rather common 20-50 fathoms.

Venericardia (Miodontiscus) prolongata Cpr. Rather common with the last.

Thyasira trisinuata polygona Jeff. A few valves dredged in 50-60 fathoms. Also taken at north end of Dall Island.

Diplodonta orbella Gld. Rather common. Much less globose than California specimens.

Phacoides (Lucinoma) annulatus Rve. A few specimens dredged in 40-60 fathoms.

Phacoides (Parvilucina) tenuisculptus Cpr. Fairly common 25-50 fathoms.

Kellia laperousii Desh. Abundant in dead shells of *Marcia kenneerlyi*.

Rochefortia tumida Cpr. A few valves dredged.

Cardium (Cerastoderma) californiense Desh. Abundant 10-40 fathoms.

Protocardia centiflosa richardsoni Whiteaves. Common 50-60 fathoms.

Saxidomus giganteus Desh. Dead valves found occasionally. Abundant in inside waters.

Marcia kenneerlyi (Cpr.) Rve. Abundant 20-40 fathoms.

Marcia subdiaphana Cpr. Rather common 50-60 fathoms.

Paphia (Protothaca) staminea Conr. Occasional in gravel between boulders. Very abundant in inside waters.

Psephidea ovalis Dall. Common 15-40 fathoms.

Tellina (Oudardia) buttoni Dall. Rather common in 50 fathoms.

Tellina (Angulus) carpenteri Dall. Fairly common with last.

Tellina (Moerella) salmonea Cpr. One pair of dead valves dredged in 40 fathoms.

Macoma calcarea Gmel. A few immature specimens dredged in 50-60 fathoms.

Semele rubropicta Dall. Occasional 25-40 fathoms.

Psammobia (Gobraeus) californica Conr. Rather common.

Siliqua patula Dixon. One dead young specimen dredged. Common in inside waters.

Spisula (Hemimactra) polynyma alaskana Dall. Dead valves found occasionally. Common in mud flats on inside waters.

Mya truncata Linn. Fairly common.

Panope generosa Gld. Single valves dredged occasionally.

Panomya arctica Lam. A few specimens taken in 50-60 fathoms.

Panomya ampla Dall. Several dredged in 25-50 fathoms.

Saxicava arctica Linn. Common. Many living specimens found in dead shells of *Marcia kennerlyi*.

Saxicava pholadis Linn. Less plentiful than the last.

PUBLICATIONS RECEIVED.

A CHECK-LIST OF THE MARINE FAUNA OF NEW SOUTH WALES, PART I, MOLLUSCA. By Charles Hedley. (Suppl. Jour. Royal Soc. N. S. W., Vol. 51, 120 pp., 1917. Issued June, 1918.) A very useful and interesting paper. The list by T. Whitelegge, of Port Jackson invertebrata, published in 1889, contained 802 marine mollusca. The present catalogue contains over 1200 species. The list has been purified notably by eliminating a block of Atlantic species included by mistake in the Challenger series of 410 fathoms off Sydney. The author estimates that future research will recognize 2000 species from the waters of this State. The nomenclature is up to date and one notes many changes, and in the position of certain families some surprises. The following new genera are proposed: *Attenuata*, *Austrodrilla*, *Epideira*, *Etrema*, *Exomilus*, *Guraleus*, *Inquisitor*, *Hemidaphne*, *Macteola*, *Nepotilla*, *Provexillum* and *Scabrella*.—C. W. J.

MOLLUSCA. By Charles Hedley. (Reprint from the Proc. Royal Geog. Soc. Australasia. S. Australian Branch, Session 1916-17, 21 pp., 1 pl., 1918.) A report on some mollusca collected in Western Australia by Dr. H. Basedow, adding about sixty species to the fauna of that State. The new species described and figured are: *Tellina piratica*, *Eucithara basedowi*, and an interesting fresh-water shell *Bulimus sisurnius*.

REPORT ON THE CEPHALOPODA OBTAINED BY THE F. I. S. "ENDEAVOUR" IN THE GREAT AUSTRALIAN BIGHT AND OTHER SOUTHERN AUSTRALIAN LOCALITIES. By S. Stillman Berry. (Biol. Results of the Fishing Experiments carried on by the F. I. S. "Endeavour," 1909-14. Commonwealth of Australia, Dept. of Trade and Customs, Fisheries, Vol. IV, pt. 5, pp.